WW Update with Data

W. Andrews, D. Evans, F. Golf, J. Mulmenstadt, S. Padhi, Y. Tu, F. Wurthwein, A. Yagil -- UCSD
D. Barge, C. Campagnari, P. Kalavase, D. Kovalskyi, V. Krutelyov, J. Ribnik -- UCSB
L. Bauerdick, I. Bloch, K. Burkett, I. Fisk, Y. Gao, O. Gutsche, B. Hooberman -- FNAL

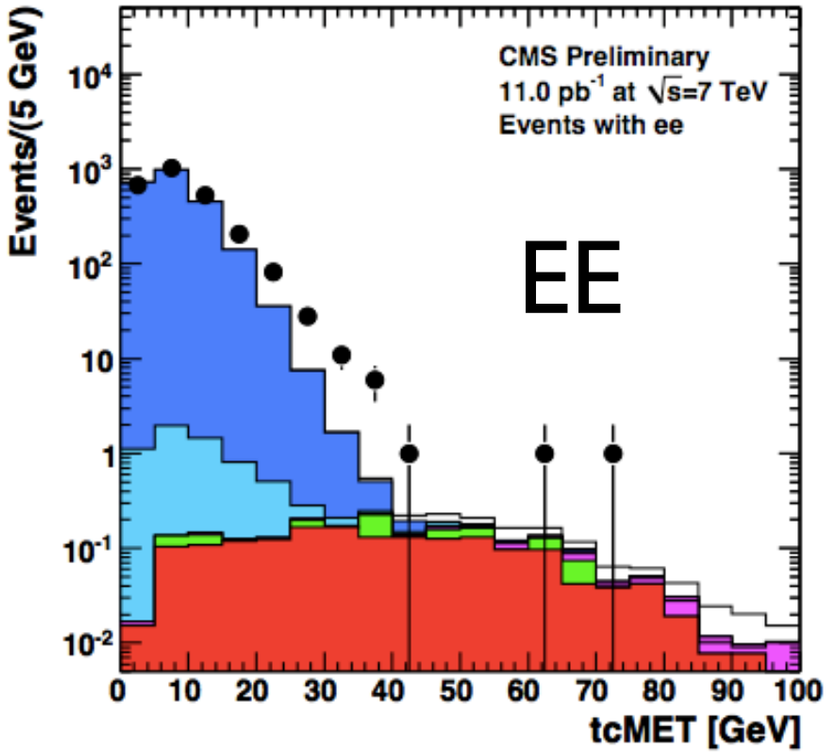
H->WW Meeting
October 19, 2010

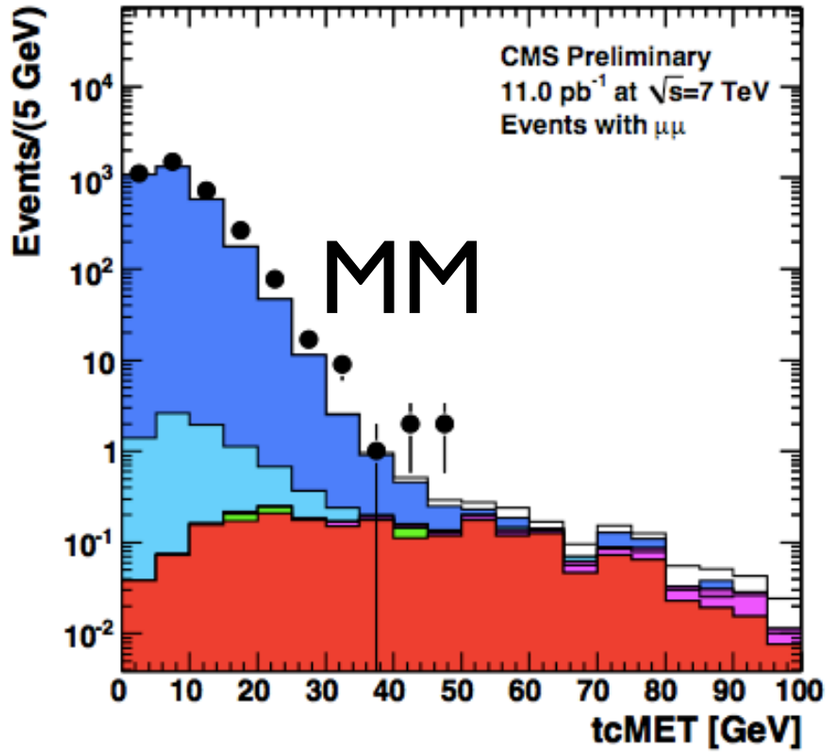
Outline

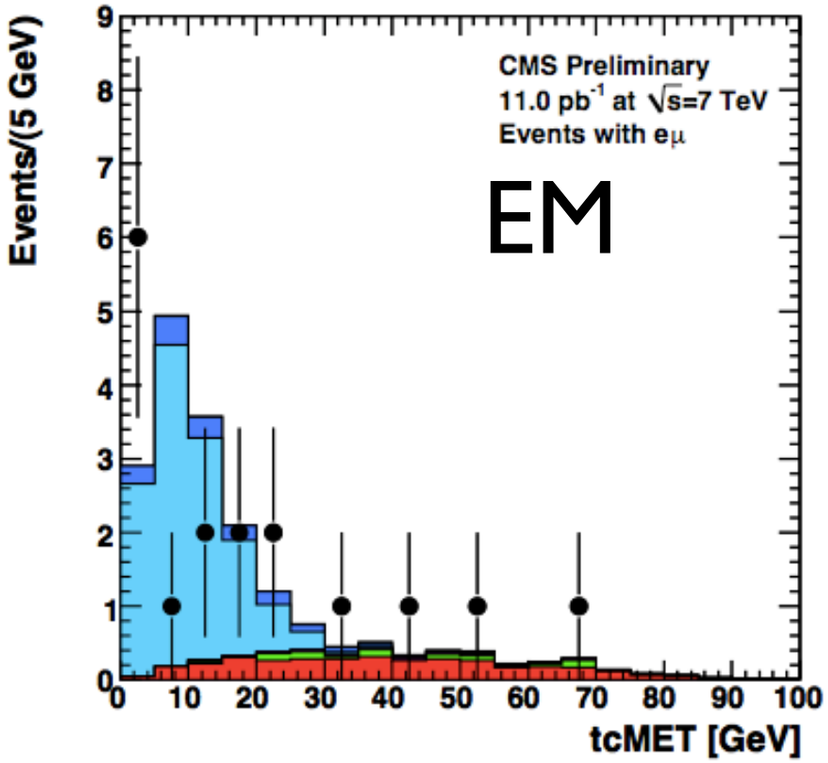
- The goal is validate the important kinematic observables after the basic lepton selections with data/MC
- Baseline Selection
  - Di-lepton with the reference selection in pT, eta and opposite sign
  - Reference selection of the Lepton ID and isolations
  - Removed the trigger requirement
- We use Sep17ReReco + PromptReco corresponding to 11/pb data, using the JSON file posted here,
  - https://hypernews.cern.ch/HyperNews/CMS/get/physics-validation/968.html

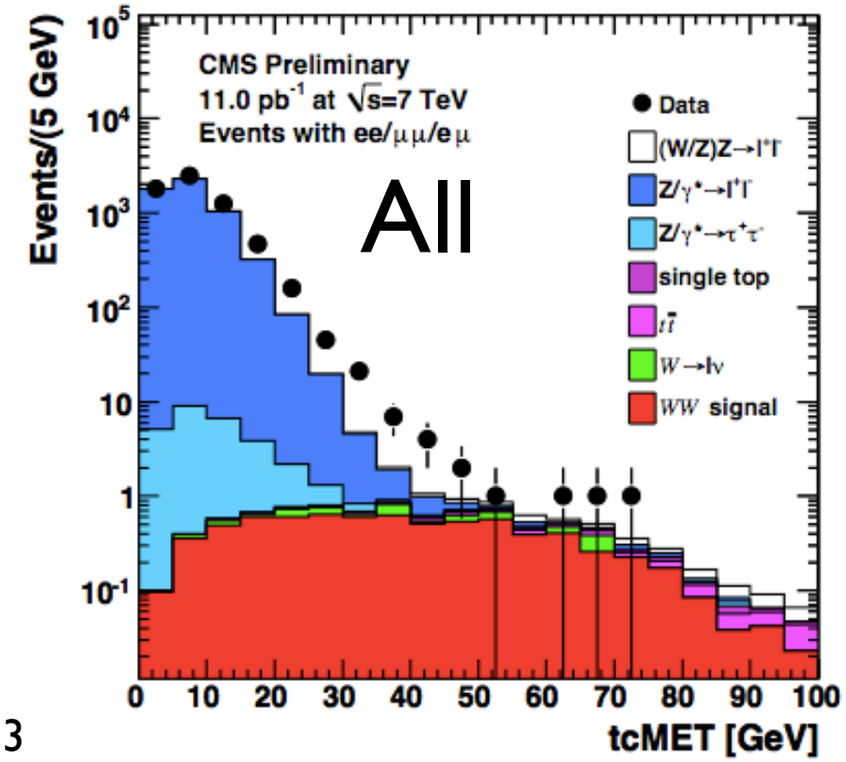
tcMET

- Apply jet-veto to suppress the ttbar contribution



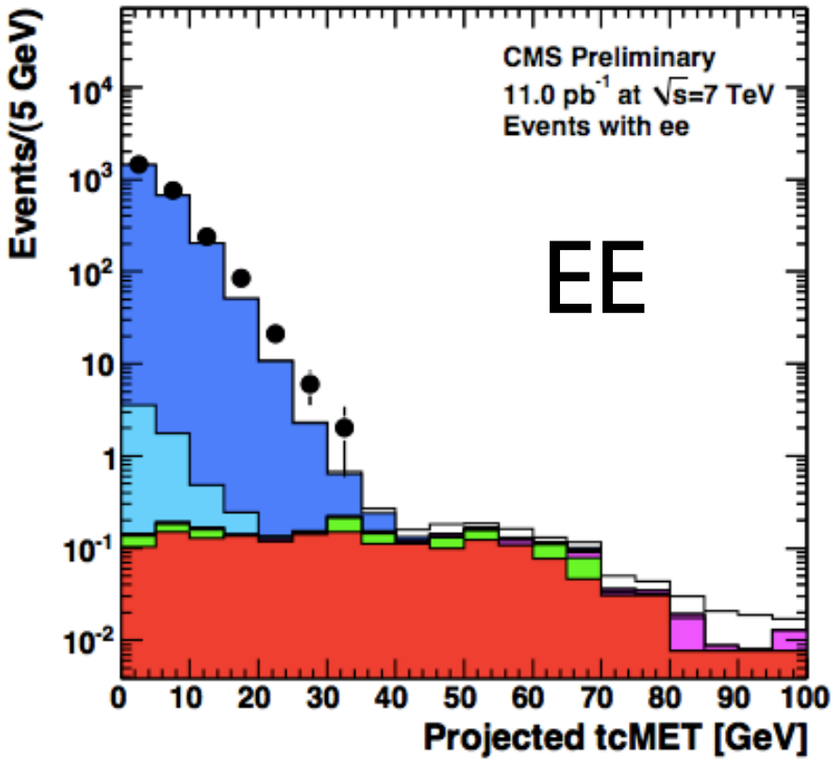


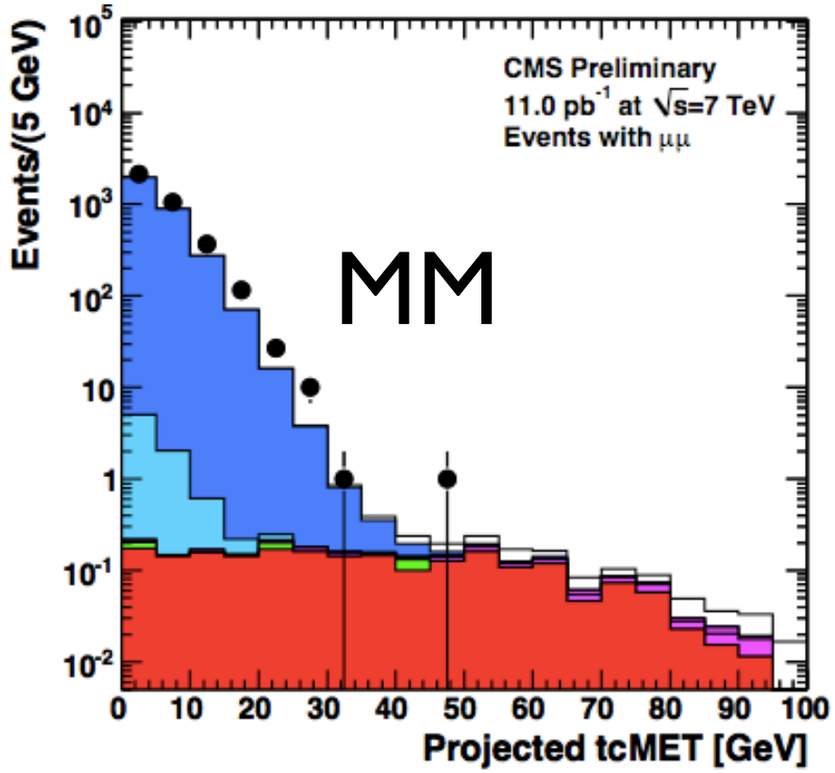


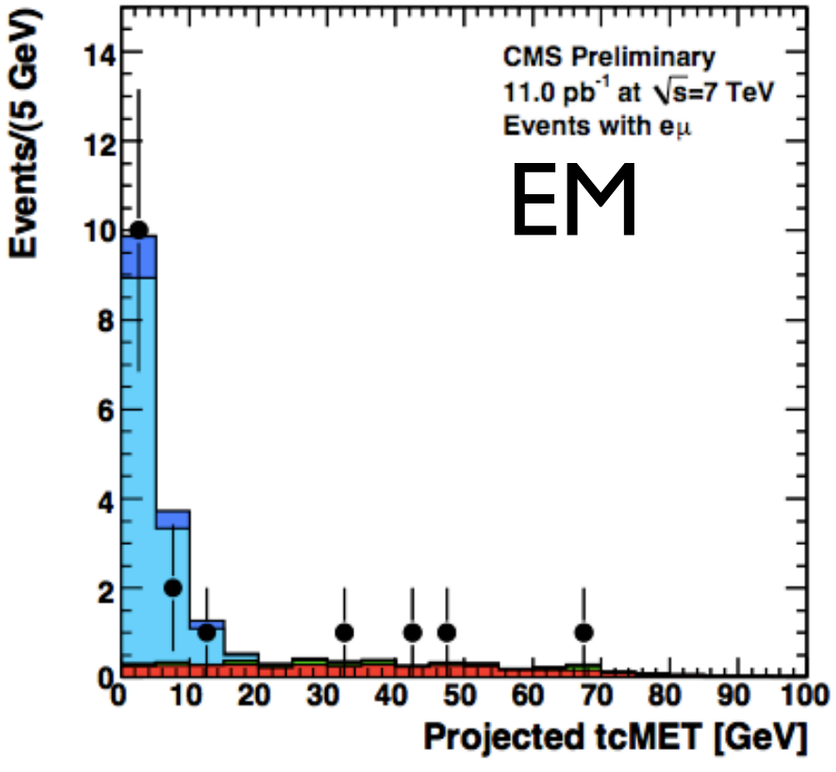


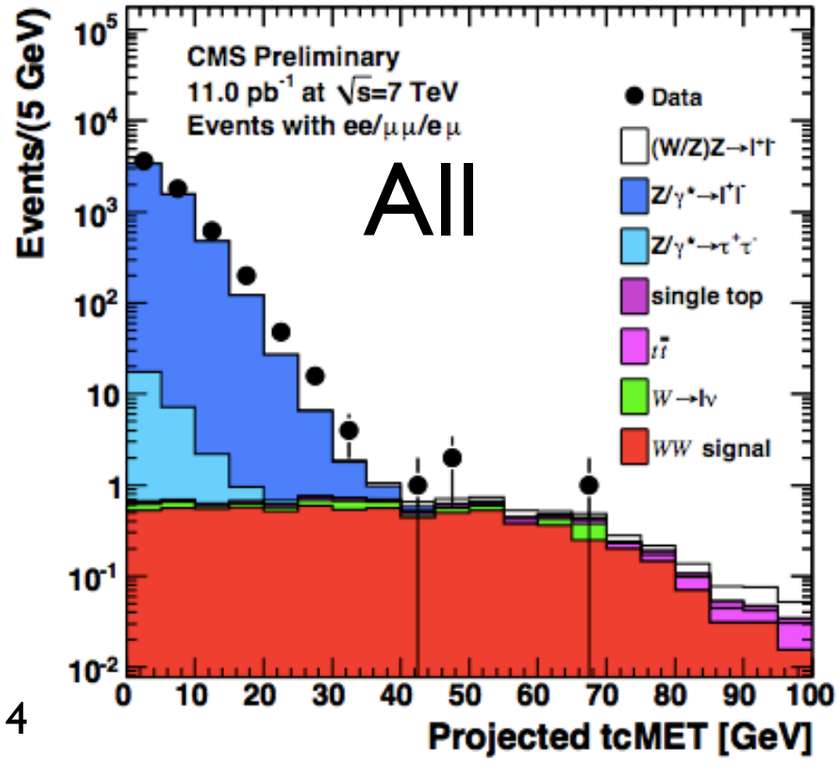
Projected MET

- Apply jet-veto to suppress the ttbar contribution



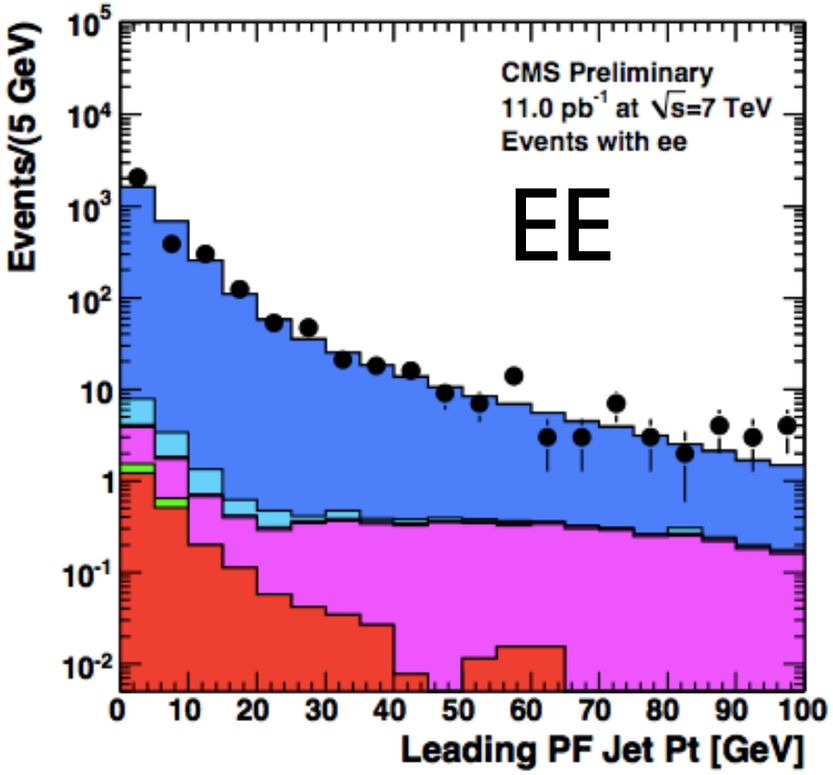


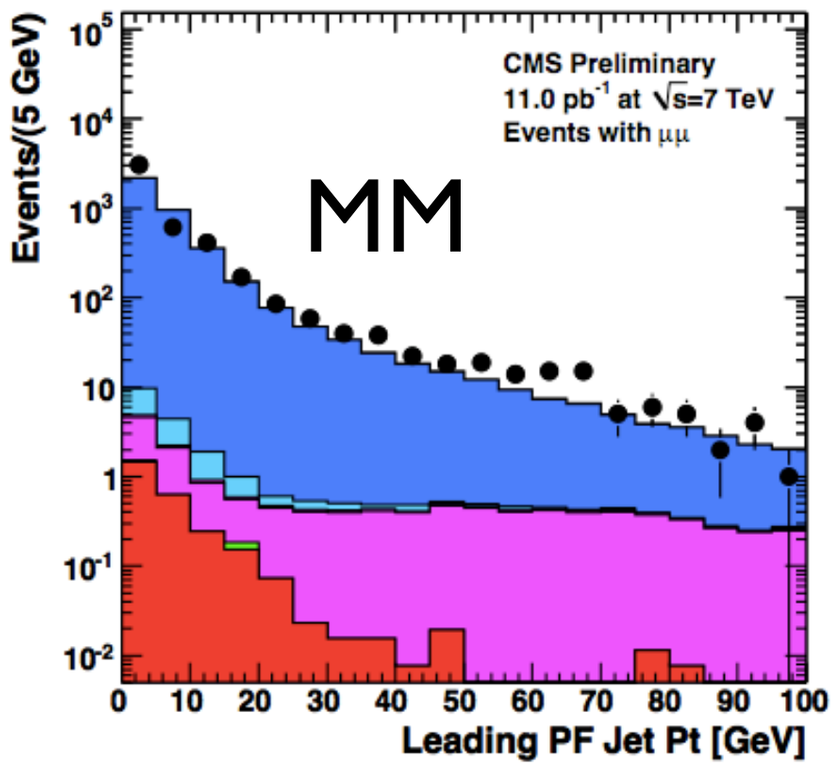


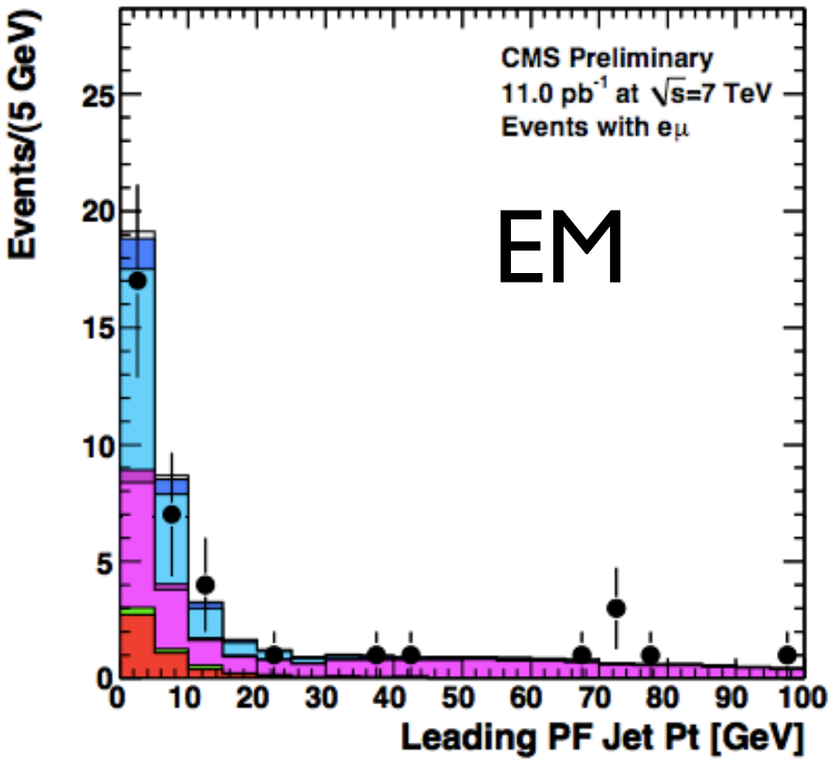


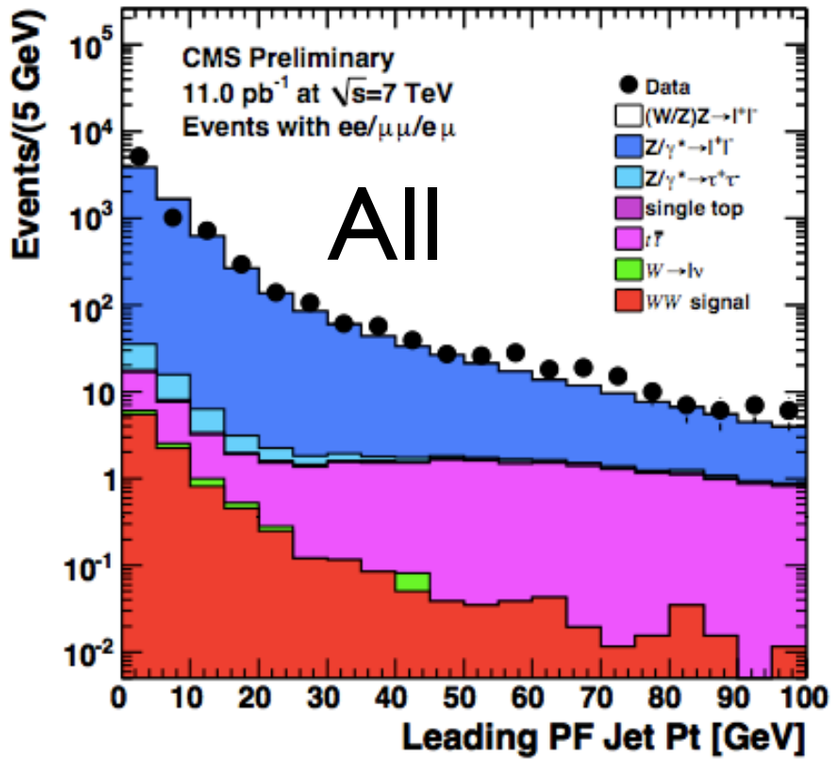
Leading PFJet pT

- No jet-veto



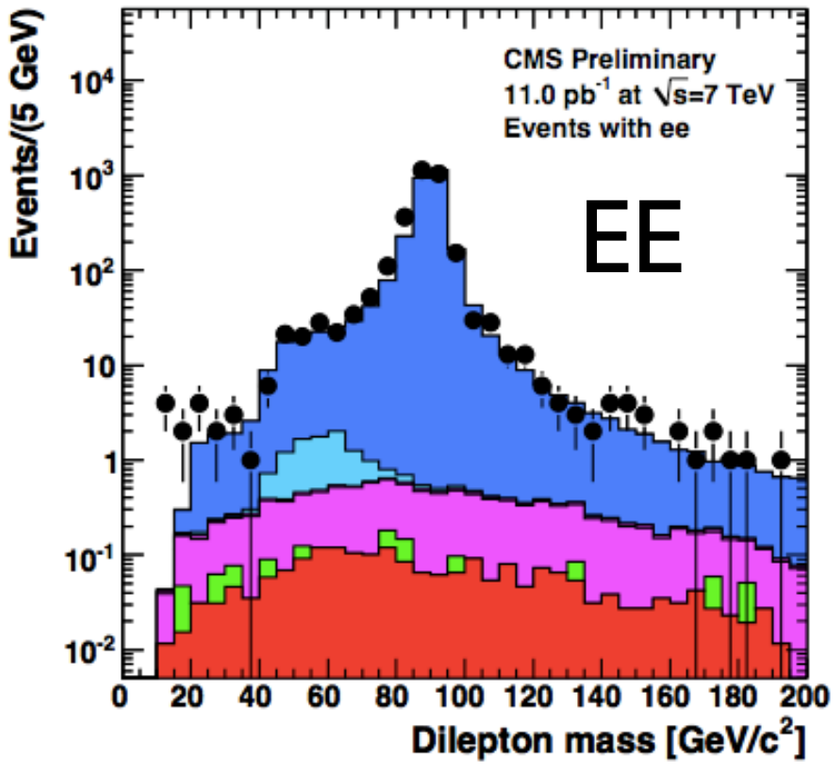


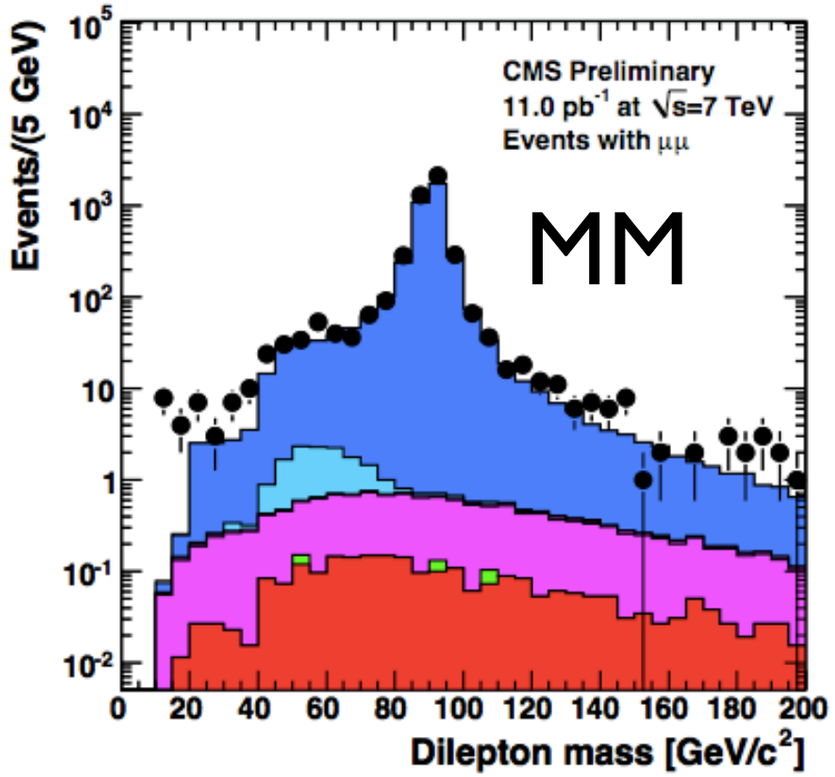


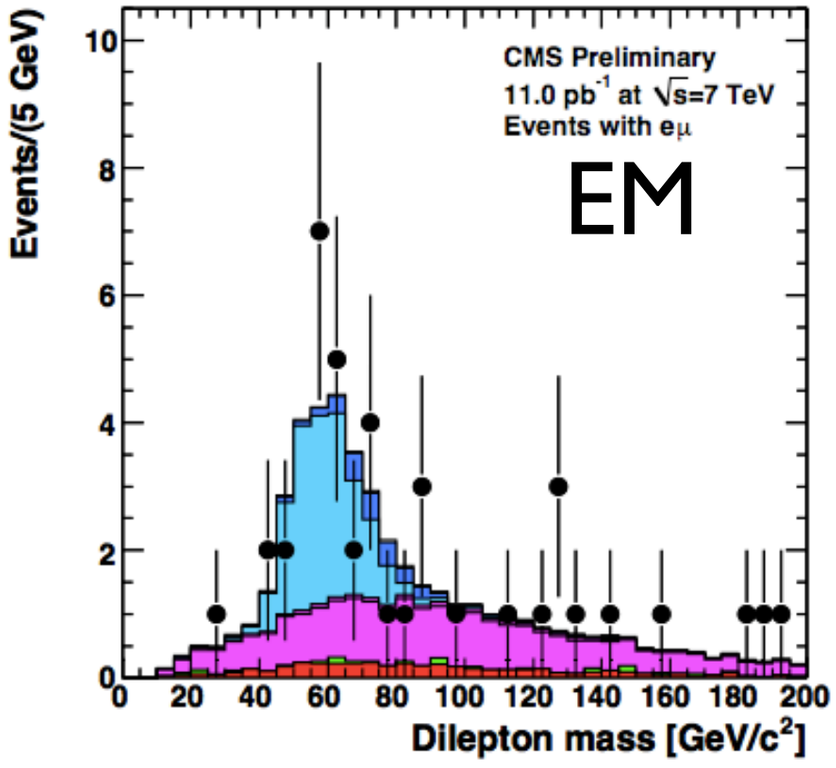


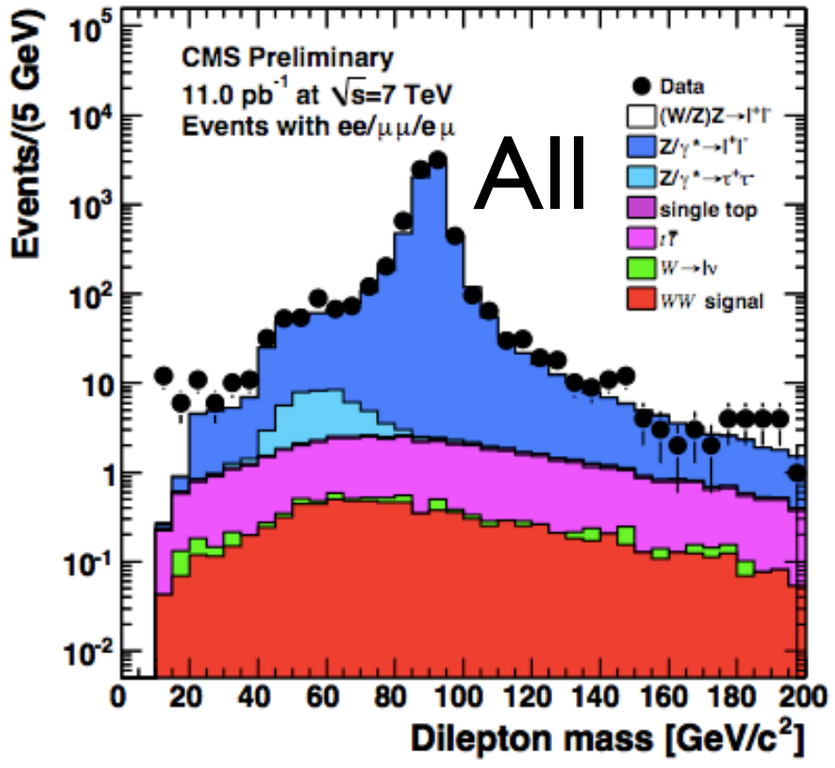
Dilepton Mass

- No jet-veto









Looking Towards the 30/pb

- Selections on top of the V0 reference cuts
  - Jet-veto: leading jet pT<25 GeV, applied to |η|<5
  - Require electron number of missHit = 0 (will update with the new nMissHit)

	DY ee	DY mumu	DY tautau	ttbar	TW	Wjets	WZ	ZZ	Total BKG	WW
mm	0.00+/-0.02	0.08+/-0.04	0.00+/-0.02	0.27+/-0.03	0.11+/-0.01	0.00+/-0.00	0.05+/-0.02	0.05+/-0.01	0.56+/-0.06	1.58+/-0.13
em	0.00+/-0.02	0.02+/-0.02	0.06+/-0.04	0.59+/-0.04	0.26+/-0.01	0.86+/-0.27	0.13+/-0.02	0.01+/-0.00	1.93+/-0.28	6.60+/-0.26
ee	0.02+/-0.02	0.00+/-0.02	0.00+/-0.02	0.11+/-0.02	0.06+/-0.01	0.09+/-0.09	0.03+/-0.01	0.04+/-0.01	0.34+/-0.09	1.19+/-0.11
all	0.02+/-0.02	0.11+/-0.05	0.06+/-0.04	0.97+/-0.06	0.42+/-0.02	0.95+/-0.29	0.21+/-0.03	0.09+/-0.01	2.83+/-0.30	9.37+/-0.31

- With the top-tagging, the top-background is expected to be reduced by half